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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,699	09/29/2000	Scott R. McMullan	28168-1/P02	9584

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EXAMINER
MAHMOUDI, HASSAN

ART UNIT	PAPER NUMBER
2175	7

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	
Office Action Summary	09/675,699	MCMULLAN ET AL.	
	Examiner	Art Unit	
	Tony Mahmoudi	2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage

        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

DOV POPOVICH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Remarks

1. In response to communications filed on 17-December-2003, claims 1-18 are presently

pending in the application.

Specification

2. The arrangement of the disclosed application does not conform with 37 CFR 1.77(b).

Section heading appear boldfaced throughout the disclosed specification. Section

headings should not be boldfaced. Appropriate corrections are required according to the

guidelines provided below:

3. The following guidelines illustrate the preferred layout for the specification of a utility

application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include
the following sections in order. Each of the lettered items should appear in upper case, without
underlining or bold type, as a section heading. If no text follows the section heading, the phrase
"Not Applicable" should follow the section heading:

    (a) TITLE OF THE INVENTION.
    (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
    (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
        DEVELOPMENT.
    (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
        COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program

listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables
having more than 50 pages of text are permitted to be submitted on compact
discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).
"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

    (1) Field of the Invention.

    (2) Description of Related Art including information disclosed under 37 CFR 1.97
    and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence
    Listing" is required on paper if the application discloses a nucleotide or amino
    acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence
    Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perkowski (U.S.

Pub. No. 2003/0139975) in view of Erickson et al (U.S. patent No. 6,412,009.)

As to claim 1, Perkowski teaches a computer system (see Abstract) comprising:

a first computer network (see figures 2-1 and 2-2 and see page 8, paragraph 96);

a first computer subsystem comprising (see figures 1 and 2C, and page 9, paragraph 102)

collaborative application software (see page 8, paragraph 95), with the collaborative

application software comprising machine readable instructions (see page 9, paragraph 105)

for sending application output data over the computer network (see page 8, paragraphs 95-96,

and see page 14, paragraph 175);

a second computer subsystem structured to receive the application output data (see figure

2C, and see page 9, paragraph 102); and

a second-subsystem firewall (see figure 3C9), located in front of the second application

subsystem (see figure 2C, and see page 9, paragraph 102), the second-subsystem firewall

structured to communicate the application output data to the second computer subsystem (see

page 14, paragraph 175) through a hypertext transfer protocol (see page 7, paragraph 83.)

Perkowski does not teach a keep-alive connection that is kept open for the duration of a

collaboration (although Perkowski teaches a "dedicated Internet connection", see page 15,

paragraph 178.)

Erickson et al teaches a persistent HTTP tunnel (see Abstract), in which he teaches a

keep-alive connection that is kept open for the duration of a collaboration (see column 8, line

32 though column 9, line 24.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to have modified Perkowski to include a keep-alive connection

that is kept open for the duration of a collaboration.

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified Perkowski by the teaching of Erickson et al, because a

keep-alive connection that is kept open for the duration of a collaboration, would enable the

system to keep the connection active/alive even during periods of inactivity, as taught by

Erickson et al (see column 9, lines 17-19.)

As to claim 2, Perkowski as modified teaches wherein the computer system further

comprises communication software (see Perkowski, page 11, paragraph 131) comprising

machine readable instructions (it is inherent that communication software has machine

readable instructions) for opening a first-subsystem thread in the second computer subsystem

for receiving the application output data (see Perkowski, page 13, paragraph 163.)

As to claim 3, Perkowski as modified teaches wherein:

the second computer subsystem comprises a second-subsystem socket structured to

receive the application output data (see Perkowski, page 18, paragraph 206); and

the communication software (see Perkowski, page 11, paragraph 131) further comprises

machine readable instructions for causing the second-subsystem socket to block on a read

(see Perkowski, page 18, paragraph 206, where "block on a read" is read on "carrying out a

search".)

As to claim 4, Perkowski as modified teaches wherein the communication software

further comprises instructions causing the first-subsystem thread to sleep (see Perkowski,

page 24, paragraph 233, where "sleep" is read on "idle moment".)

As to claim 5, <u>Perkowski</u> as modified teaches wherein the collaborative application software sends the application output data as a stateful communication (see <u>Perkowski</u>, page 35, paragraph 340, where "stateful" is read on "reflecting the state of the client and the server".)

As to claim 6, <u>Perkowski</u> as modified teaches the application output data is structured and arranged according to an HTTP protocol (see <u>Perkowski</u>, page 19, paragraph 208.)

<u>Perkowski</u> as modified still does not teach an HTTP 1.1 protocol.

<u>Erickson et al</u> teaches a persistent HTTP tunnel (see Abstract), in which he teaches an HTTP 1.1 protocol (see column 6, lines 14-18, and see column 7, lines 3-13.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified <u>Perkowski</u> as modified, to include an HTTP 1.1 protocol.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified <u>Perkowski</u> as modified, by the teaching of <u>Erickson et al</u>, because "a newer" HTTP 1.1 protocol, would "provide a keep-alive mechanism that allows one connection for multiple objects on an HTML page, as taught by <u>Erickson et al</u> (see column 2, lines 10-19.)

As to claim 7, <u>Perkowski</u> as modified still does not teach wherein:

the second-subsystem firewall comprises a port 80; and

the application output data is communicated across the second-subsystem firewall

through a connection originated through port 80.

Erickson et al teaches a persistent HTTP tunnel (see Abstract), in which he teaches:

the second-subsystem firewall comprises a port 80 (see figure 3, port **130**); and

the application output data is communicated across the second-subsystem firewall

through a connection originated through port 80 (see column 5, line 47 through column 6,

line 3.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to have modified Perkowski as modified, to include the

second-subsystem firewall comprises a port 80; and the application output data is

communicated across the second-subsystem firewall through a connection originated through

port 80.

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified Perkowski as modified, by the teaching of Erickson et

al, because including the second-subsystem firewall comprises a port 80; and the application

output data is communicated across the second-subsystem firewall through a connection

originated through port 80, would prevent making additional holes in firewalls as taught by

Erickson et al (see column 5, lines 60-62.)

As to claim 8, Perkowski as modified teaches wherein the first computer subsystem (see

Perkowski, figure 2C) comprises:

a server computer (see Perkowski, figure 2C, computer **202**);

a Web server computer (see Perkowski, figure 2C, server **133**), and

a second computer network structured to allow data communication between the server

computer and the Web server computer (see Perkowski, figure 2C, the subsystem shown

below the "corporate firewall".)

As to claim 9, Perkowski as modified teaches wherein:

the server computer comprises at least a portion of the collaborative applications software

(see Perkowski, page 11, paragraph 131); and

the Web server computer (see Perkowski, figure 2C, computer **133**) is structured to

receive the application output data from the server computer over the second computer

network and to send the application output data to the second computer subsystem over the

first computer network (see Perkowski, figure 2C, and see page 13, paragraphs 163-164.)

As to claim 10, Perkowski as modified teaches wherein:

the Web server computer (see Perkowski, figure 2C, computer **133**) comprises a Web

server socket structured to receive the application output data from the server computer over

the second computer network (see Perkowski, page 9, paragraph 100); and

the communication software (see Perkowski, page 11, paragraph 131) further comprises

machine readable instructions (it is inherent that communication software has machine

readable instructions) for causing the Web server socket to block on a read (see Perkowski,

page 18, paragraph 206, where "block on a read" is read on "carrying out a search".)

As to claim 11, Perkowski as modified teaches the system further comprising:

a third computer subsystem structured to receive the application output data (see

Perkowski, figure 3A9); and

a third-subsystem firewall, located in front of the third computer subsystem the third

subsystem firewall structured to communicate the application output data to the third

computer subsystem through a hypertext transfer protocol (see Perkowski, page 7, paragraph

83) keep-alive connection (see Erickson et al, column 8, line 32 though column 9, line 24.)

As to claim 12, Perkowski as modified teaches wherein:

the third computer subsystem comprises a third-subsystem socket structured to receive

the application output data (see Perkowski, page 18, paragraph 206); and

the communication software further comprises machine readable instructions for causing

the third-subsystem socket to block on a read (see Perkowski, page 18, paragraph 206, where

"block on a read" is read on "carrying out a search".)

As to claim 13, Perkowski as modified teaches wherein communication between the first

computer subsystem, the second computer subsystem and the third computer subsystem is in

real-time (see Perkowski, page 67, paragraph 760.)

As to claim 14, Perkowski as modified teaches wherein the collaborative application

software comprises at least one of the following functions: a word processor, a task

scheduling tool, a graphics program, a presentation program, a spreadsheet, a game, a music studio (see Perkowski, page 66, paragraph 757.)

As to claim 15, Perkowski teaches a method of communicating over a computer network (see Abstract), the method comprising the steps of:

generating, by a collaborative application software residing on a server computer, an application output communication (see page 8, paragraph 97);

sending, over a first computer network (see figure 2C), the application output communication to a client firewall (see page 7, paragraph 83);

communicating the application output communication (see page 2, paragraph 22, where "communicating" is read on "transmitting") across the client firewall through a hypertext transfer protocol (see page 15, paragraph 178); and

receiving the application output data at a client computer (see page 14, paragraph 175.)

Perkowski does not teach a keep alive connection; and keeping the hypertext transfer protocol keep-alive connection for the duration of a collaboration (although Perkowski teaches a "dedicated Internet connection", see page 15, paragraph 178.)

Erickson et al teaches a persistent HTTP tunnel (see Abstract), in which he teaches a keep-alive connection that is kept open for the duration of a collaboration (see column 8, line 32 though column 9, line 24.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Perkowski to include a keep-alive connection that is kept open for the duration of a collaboration.

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified <u>Perkowski</u> by the teaching of <u>Erickson et al</u>, because a

keep-alive connection that is kept open for the duration of a collaboration, would enable the

system to keep the connection active/alive even during periods of inactivity, as taught by

<u>Erickson et al</u> (see column 9, lines 17-19.)

As to claim 16, <u>Perkowski</u> as modified teaches wherein the client computer blocks on a

read when waiting for and receiving the application output data (see <u>Perkowski</u>, page 18,

paragraph 206, where "block on a read" is read on "carrying out a search".)

As to claim 17, <u>Perkowski</u> as modified teaches the method further comprising the step of

originating a connection across the client firewall through a port of client firewall (see figure

2C.)

<u>Perkowski</u> as modified still does not teach connecting through port 80 of the firewall.

<u>Erickson et al</u> teaches a persistent HTTP tunnel (see Abstract), in which he teaches

connecting through port 80 of the firewall (see column 5, line 47 through column 6, line 3.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to have modified <u>Perkowski</u> as modified, to include connecting

through port 80 of the firewall.

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified <u>Perkowski</u> as modified, by the teaching of <u>Erickson et</u>

al, because connecting through port 80 of the firewall, would prevent making additional holes in firewalls as taught by Erickson et al (see column 5, lines 60-62.)

As to claim 18, Perkowski as modified teaches wherein the application output data is sent, at the sending step, as a plurality of data packets structured and arranged according to HTTP (see page 19, paragraph 208.)

Perkowski as modified still does not teach an HTTP 1.1.

Erickson et al teaches a persistent HTTP tunnel (see Abstract), in which he teaches an HTTP 1.1 (see column 6, lines 14-18, and see column 7, lines 3-13.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Perkowski as modified, to include an HTTP 1.1.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Perkowski as modified, by the teaching of Erickson et al, because "a newer" HTTP 1.1, would "provide a keep-alive mechanism that allows one connection for multiple objects on an HTML page, as taught by Erickson et al (see column 2, lines 10-19.)

Response to Arguments

6. Applicant's arguments filed on 17-December-2003 with respect to the rejected claims in view of the cited references have been fully considered but they are considered moot in view of the new grounds of rejection.

Conclusion

7. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (703) 305-3830.

tm

February 23, 2004

DOV POPOVICI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100